MX56

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Safety

This STB has been manufactured to satisfy the international safety standards. Please read the following safety precautions carefully.

MAIN SUPPLY

:AC 100/240V, 50/60Hz, 30W.

OVERLOADING

:Do not overload a wall outlet, extension cord or adapter as this may result in fire or electric shock.

LIQUIDS

:This STB shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the STB.

CLEANING

:Disconnect the STB from the main supply before cleaning. Do not use any kind of solvents to clean the STB, only use a soft-dry cloth.

VENTILATION

:The slots on top of the STB must be left uncovered to allow proper airflow to the unit.
Do not stand the STB on soft furnishings or carpets.
Do not expose the STB to direct sunlight or do not place it near a heater.
Do not stack electronic equipments on top of the STB.

ATTACHMENTS

:Do not use any unrecommended attachments as these may cause hazard or damage the STB.

CONNECTION TO THE TERRESTRIAL ANTENNA

:Disconnect the STB from the main supply before connecting or disconnecting the cable from the terrestrial antenna.
FAILURE TO DO SO CAN DAMAGE THE ANTENNA.

CONNECTION TO THE TV

:Disconnect the STB from the main supply before connecting or disconnecting the cable from TV.
FAILURE TO DO SO CAN DAMAGE THE TV.

EARTHING

:The antenna cable MUST BE EARTHED to the system earth for the Terrestrial antenna.

LOCATION

:Place the STB indoor in order not to expose to lightening , rain or Sunlight.

General Introduction

INTRODUCTION

This manual will help you learn basic functions such as installation, selecting channels and many other functions of the STB. All functions can be operated by the remote control. You can easily install it by selecting " **Installation** function and upgrade its software through communication cable.

The remote control is designed for easy access to all the functions at once and for comfortable grab for your hand. It is programmed to control all functions and to easily watch TV and Radio programs via the STB**.**

WARNING

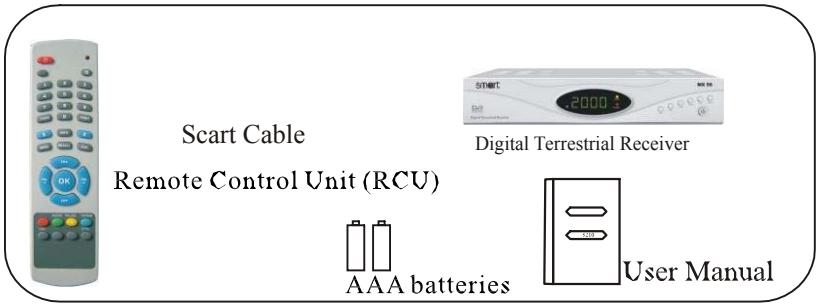
Any problems caused by the use of unofficial software. The use of software versions other than dealers or distributors official software will void the manufacturer 's warranty. It is advised that only the formal software released from dealers or distributors should be used.

General Introduction

UNPACKING

Unpack the unit and check to make sure that all of the following items are included in the packaging.

1 x Remote Control Unit (RCU)
1 x User Manual
2 x AAA batteries
1 x Digital Receiver Terrestrial
1 x A/V Cable



➢ We hope you enjoy using your Digital Terrestrial Receiver!ccr

Glossary

22KHz switch
A tone that can be sent via the LNB coax. This tone can control the LNB or switches on the coax cable. Do not do not interfere with the DC or 22kHz tone that the receiver sends to the dish..

Antenna
A device that collects and radiates electromagnetic waves.
Includes a satellite dish and a broadband antenna.

CVBS
Composite Video Baseband Signal. Standard single-wire video, mixing luma and chroma signals together.

Forward Error Correction (FEC)
A system of error control for data transmission.

Frequency
The number of cycles or events per one second, which is expressed in the unit of Hertz(Hz)

Intermediate Frequency (IF)
A frequency to which a carrier frequency is shifted as an intermediate step in transmission or reception.

Low Noise Block (LNB) Downconverter
A low noise microwave amplifier and converter which downconverts a range of frequencies to IF range.

NTSC
National Televison Standards Committee, A video standard established by the United States (RCA/NBC) and adopted by numerous other countries

PAL
Phase Alternate Line. A video standard used in Europe and other parts of the world for composite color encoding.

Packet Identifier (PID)
A set of numbers that identifies transport stream packets containing data from a single data stream.

Glossary

Polarization
Satellite waves are polarized. They can be linear or circular. Linear polarity is Vertical or Horizontal, circular polarity is Righ-hand and Left-hand circular polarity.

Quaternary Phase Shift Keying (QPSK)
Phase-shift keying in which four different phase angles are used.

RF
A frequency that is useful for radio transmission, usually between10kHz and 300,000Mhz

RGB
Video information in the form of Red, Green, and Blue tristimulus values. The combination of three values representing the intensity of each of the three colors can represent the entire range of visible light.

STB
Set Top Box, another common name of Digital Satellite Receiver, because it usually be put on top of TV in household. This word is used now worldwide.

Symbol Rate
The amount of data transmitted every second.

Transponder (TP)
Equipment in a satellite which receives a single uplink channel from a satellite Earth station, amplifies it, converts the frequency and changes the polarization, then rebroadcasts it back to Earth.

Transport Stream
The bit stream formed prior to transmission of signals by combining the video, audio and data streams of one service. It consists of fixed length packets of 188 bytes of data.

USALS
Universal Satellite Automatically Location System, a system established by STAB
www.usals.info

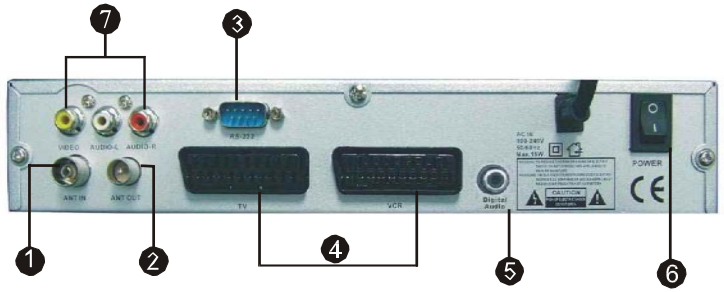
Front Panel / Rear Panel

➤ **Front Panel**

⏻ : Press to switch between Operation and Standby modes.
⇓⇑ : Changes channels or items from top to bottom on the menus.
↘↗ : Increase or Decrease the volume of sound.
M : Press to display MENU.
OK : Press to proceed confirmation.

Dimension:**260mm x 195mm x 48mm (W x D x H)**

➤**Rear Panel**

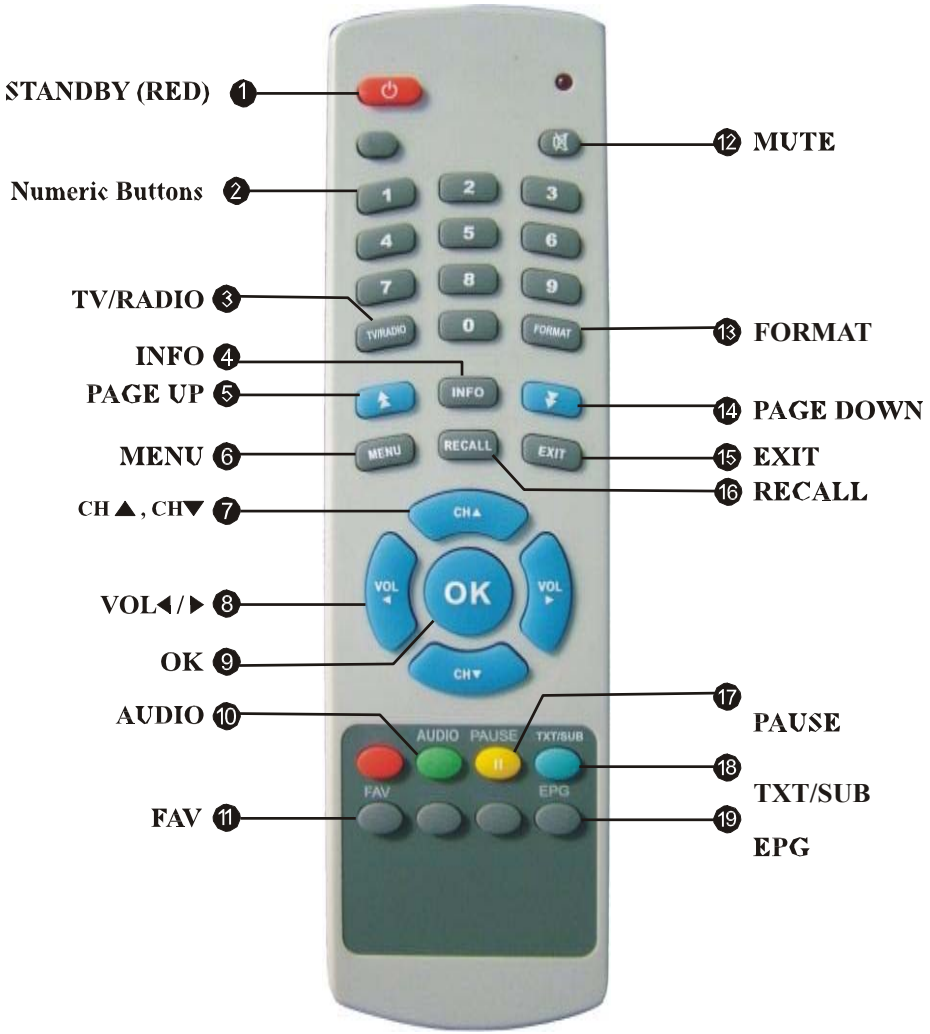


❶**ANT IN**: Connect to Terrestrial Antenna
❷**ANT OUT**: Use it when connecting to another STB.
❸**RS-232**: Use it when connecting to your PC.
❹**TV/VCR SCART**:For the video/audio input of the TV and VCR.
❺**DIGITALAUDIO**: SPDIF audio format output system.
❻**POWER**: Power on/off switch.
❼**A/V RCA**: To connect the Audio/Vedio RCA output to TV

Front Panel Display

U 52	**RF CHANNEL**	LOAD	**LOADER MODE**
E007	**FLASH ROM ERROR**	HELLO	**OPENING GREETINGS**
ERR	**ERROR**	-E5-	**UPDATE WAITING**
00:25	**STANDBY/TIME**	3245	**RECEIVE DATA**
0001	**TV/RADIO MODE**	▬	**SIGNAL IS RECEIVED**
-0-	**UPDATE IS FINISHED**	▬	**NO SIGNAL IS RECEIVED**

Remote Control Unit



Remote Control Unit

1 STANDBY (RED)
Switches between Operation and Standby modes.

2 Numeric Buttons
Changes channels or selects the menu options.

3 TV/RADIO
Switches between TV and Radio modes.

4 INFO
Displays the program information box on the screen.

5 PAGE UP
Press to jump one page up or change EPG program list up

6 MENU
Moves to main menu during TV viewing.

7 CH▲ ,CH▼
Changes channels or items from top to bottom on the menu.

8 VOL◄ , ► VOL
Turns up/down volume.
Changes the page of channel list.

9 OK
Displays the channel list and selects the item on the menu.

10 AUDIO
Changes audio mode to left right and stereo.

11 FAV
Selects favorite channel list or current channel list in the view mode In Edit Channel mode's " **Add favorite** menu it changes the right window's channel list.

12 MUTE
Turns sound on or off.

13 FORMAT
To adjust TV setting.

Remote Control Unit

⑭PAGE DOWN
Press to jump one page down or change EPG program list down

⑮IEXIT
Press to exit the current menu.

⑯RECALL
Press to jump to previous Channel.

⑰PAUSE
Pauses to freeze the screen.

⑱TXT
Displays TXT information broadcasting from DVB-T TV provider.

⑲EPG
Electronic Program Guide button displays the TV/Radio program guide broadcasting by DVB-T TV provider

S.T.B Connection

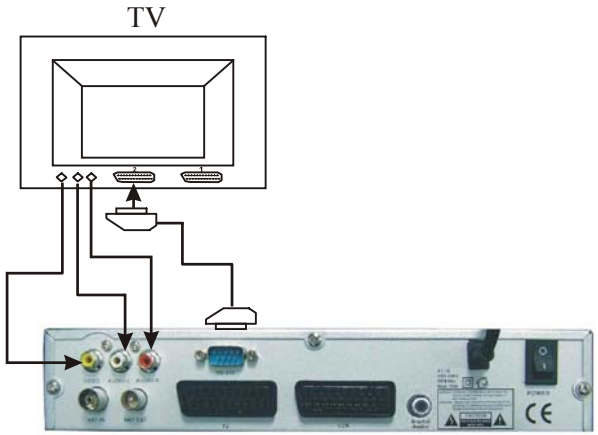
Various equipment and TV/VCR can be connected to STB.
This manual will explain common ways to connect to the equipment.
If you experience any problem, please contact your sales agency.

1. How to connect the STB to a TV set

① Connect one end of the SCART cable to the TV SCART socket on the back of the
STB and the other end to the SCART input socket on your TV.

② Connect A/V RCA cable to A/V output on the STB, and the other end to A/V input socket on your TV

③ Connect the antenna cable to the ANTENNA IN input connector of STB.



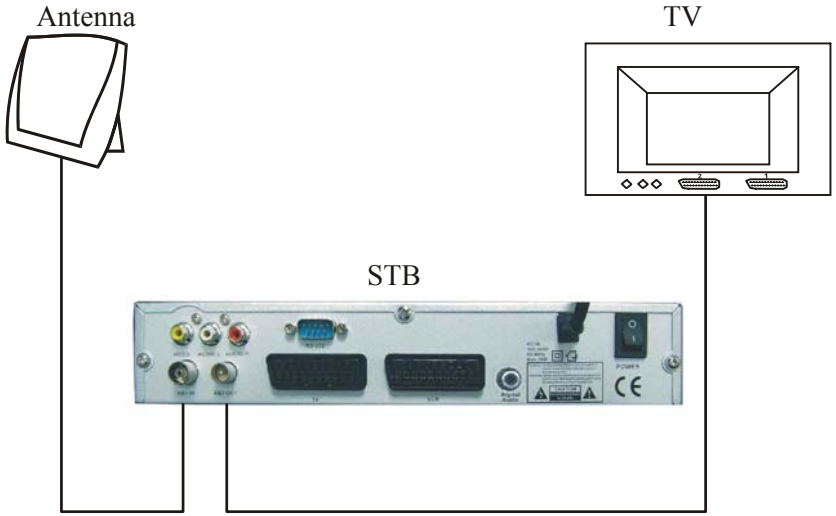
S.T.B Connection

2. How to connect to Terrestrial Antenna

① Connect the ANT IN socket on STB to a Terrestrial Antenna, for the local television broadcasting signal.

② Connect the TO TV socket to input socket on TV using the coaxial cable.

③ Adjust the Installation menu of STB to get the DVB-T TV program.



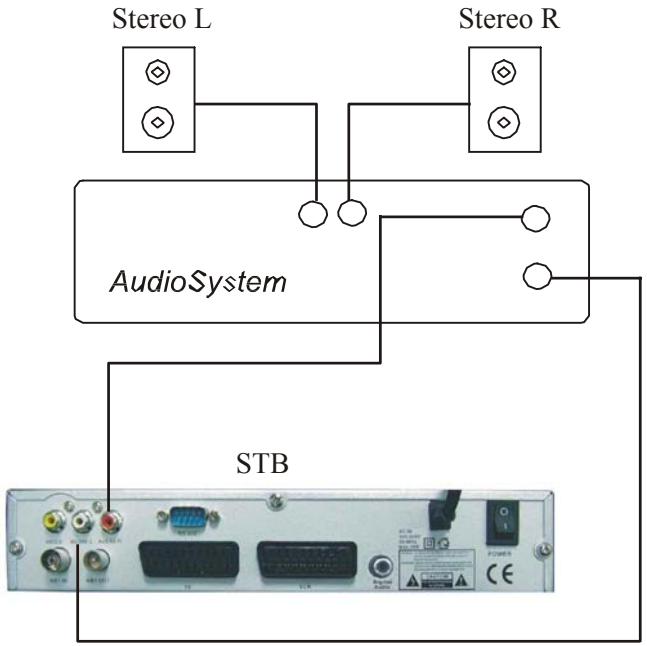
S.T.B Connection

3. How to connect the Audio system

① Connect the AUDIO R, L socket of the STB to the Audio System like HI-FI, Amplifier, etc..

② Audio System must capable of stereo audio ability

③ If Digital Audio or S/PDIF Optical output are available on STB, you can get better stereo experience



1. Main Menu

Fig1.1

The STB contains a facilitated user interface, this function is to make user easy to call all device functions. Operation Steps: Press "**MENU**",you can see this main menu.

When no menu is appeared on the screen, you press the [**MENU**] key that will display the main menu. The focus is stopped in the first item until the user select it.
When menu is appeared on the screen, you press the [**MENU**] key that will return to the up-level menu.

[OK] key: When you press the key that will go to current sub-level menu item.

[▲ ▼] Key: The focus will move up or down.

[EXIT] key: Close all menu.

2. Preference

Fig2.1

In "**Preference**" menu user can select "**Language**", "**OSD Setting**" and "**Parent Lock**" settings.

2.1 Language

User can use "**Language**" menu(Fig 2.1) to set the language type

2.2 OSD Setting

Fig2.2

"**OSD Setting**" menu(Fig 2.2) let user select the color of menu.

2.3 Parent Lock

When you select "**Parent Lock**" menu (Fig 2.3), you can set lock function or modify your Pin code.

Fig2.3

If "**Parent Lock**" item is set to "**ON**",you must input the correct Pin code when you change to a locked channel.

If "**Install Lock**" item is set to "**ON**",you must input the correct Pin code when you want to enter the main menu.

The default Pin code is **8866**.

3. Edit

Fig3.1

Use the main menu, you can press left or right key to select "**Edit**" icon (see Fig 3.1).

From this menu, we can select "**Channel Manger**", "**Add Favorites**" and "**Favorite Manger** items.

3.1 Channel Manager

You can edit channel information in the "**Channel Manager**" Menu (Fig 3.2).

Fig3.2

Use "**TV/Radio**" key to view TV or radio channel list. With the help of menu, you can set the channel status.

3.2. Add Favorites

Use "**Add Favorites**",you can designate the channels of the current TV/Radio list as favorite channels.

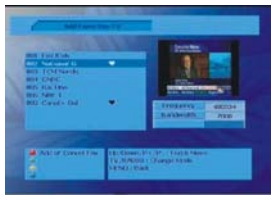


Fig3.3

Move cursor to the required channel with Up/Down key, and then press "**Red**" key on the remote controller to set channel as favorites. If "Red" key is pressed again the selected channel is un-selected from your favorite list.

To select Radio channel in the TV list, use "**TV /Radio**" key on the remote controller, and use "**TV /Radio**" key to select TV channel in the Radio channel list.

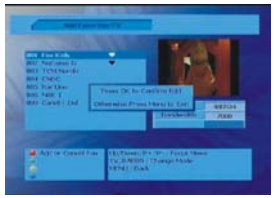


Fig3.4

When you want exit from this menu, please press "**MENU**" key, you can see a dialogue (Fig 3.4), this dialogue let you confirm your operation.

You can see the favorite list if you press the "**Fav**" key while you are watching TV (or listening Radio channel) in normal state.

3.3 Favorite Manager

The function is basically the same as the channel manager menu

Fig3.5

Lock: Same as the Lock function in "**Channel Manager**" menu. **Skip:** Same as the skip function in **Channel Manager** menu. **Rename:** Same as the rename function in **Channel Manager**" menu. **Sort:** Same as the Sort function in **Channel Manager** menu

4. Scan

Use the main menu, you can press left or right key to select **Scan** icon. (Fig 4.1)
From this menu, we can select "**Auto Searching**, **Manual Searching** and **Timer Setting** items.

Fig4.1

4.1 Auto Search

From "**Scan**" menu (Fig 4.1), you can select "**Auto Searching**" menu (Fig 4.2).User can select this menu to search the whole programs of the default frequency range.

Fig4.2

4.2 Manual Searching

From "**Scan**" menu (Fig 4.1), you can select "**Manual Searching**" menu (Fig 4.3).

Set the "**TP Frequency**" and "**Bandwidth**".
Set "**Auto Mode**" to "**NO**".
Set "**Trans Mode**" (Fig 4.4) and "**Guard Interval**" (Fig 4.5)parameter.

Fig4.3

If there is some signal displayed in "**Signal Power**" and "**Signal Quality**" items. press "**RED**" key to search program. If you can not see any signal, please check the parameter setting

Fig4.4

Fig4.5

4.3 Timer Setting

From "**Scan**" menu (Fig 4.1), you can select "**Timer Setting**" menu (Fig 4.8). This menu can set 8 timers to make the receiver perform the designated actions.

Fig4.8

Use the "**Up/Down**" button to select the timer. If you press "**OK**" to select a timer, You can see the current setting state of this timer (Fig 4.9).

If you use this timer, please set "**Timer State**" to "**Enable**" status. You can see a extended menu (Fig 4.10).

Fig4.9

Use the "**Up/Down**" button to select item, and change the parameters Use "**Left/Right**" button. If you have completed the timer settings, use "**Red**" or "**Blue**" button to save timer setting.

Timer Number: You can select up to 8 timers.

Timer Cycle: You can set the cycle of the action designated in the timer mode. "**One Time**", "**Every Day**" and "**Every Week**"

Timer Service: You can set the timer service mode ("**Sleep**", "**Wakeup**", "**VCR Record**").

Fig4.10

Date: You can set the starting date of the timer action if you press "**OK**", calendar action.

Start Time: You can set the starting time of the timer action.

Ending Time: You can set the ending time of recording when the "**Timer Service**" is "**VCR Record**".

Channel: You can select the program channel to record when the "**Timer Service**" is set to "**VCR Record**".When "**Timer Service**" is "**Wakeup**", this channel is viewed by receiver

5. Config

Use the main menu, you can press left or right key to select "**Config**" icon (see Fig 5.1). From this menu, we can select "**Clear Data**", "**TV Setting**", "**Set Time**", "**System Update**" and "**System Information**" items.

Fig5.1

5.1 Clear Data

From "**Config**" menu (Fig 6.1), you can select "**Clear Data**" menu (Fig 5.2)

Fig5.2

-Delete All Programs : Delete only the saved channel data ,other setting values are not deleted.

-Reset To Default : Delete all the data currently saved, and reset the system to the default status.

5.2 TV Setting

From "**Config**" menu (Fig 5.1), you can select "**TV Setting**" menu (Fig 5.3) to set video and RF output.

Fig5.3

5.3 Set Time

From "**Config**" menu (Fig 5.1), you can select "**Set Time**" menu (Fig 5.4) to set your STB's time. This function is useful for EPG and some timer functions.

If a broadcaster provides GMT, you can set the time using GMT or set your own time by yourself.

If the "**GMT usage**" is set to "**On**", "**Current time**" is automatically set and you can only set the time zone.

If you set "**GMT Usage**" to "**OFF**", button on the item then calendar window is displayed. You can select the date from calendar.

Fig5.4

5.4 System Upgrade

You can do "**System Update**" via other STB.

Fig5.5

5.5 System Information

From "**Config**" menu (Fig 5.1), you can select "**System Information**" menu (Fig 5.6).
"**System Information**" menu shows the system information including the Firmware version and model name.

Fig5.6

6. Playback

In play status, various menus can be displayed on the screen with remote control action. You can change the current status and mode with various Keys.

6.1 Program information

The bottom banner shows the information of the current channel. (see Fig 6.1)

① Channel type icon, TV or radio
② Current time
③ Channel number and the name of channel
④ Event name
⑤ Teletext icon
⑥ Favorite icon
⑦ Audio track status, left, right or stereo
⑧ Lock status

Fig6.1

-MUTE : Mutes the current channel audio.

-POWER : Turns the receiver power on/off.

-SOUND : Sets the current channel audio to stereo/left-mono/right-mono.

-LANG : Shows the list of the audio language available in the current

channel.(The selected audio language information is saved and applied when you watch the channel.)

-**TV/RADIO** : Changes the current mode.

-**Numeric Key(0-9) :** You can change channel by input the channel number directly.

-**Up/Down :** Move to the previous/next channel.

Fig6.1

-**MENU** : You can enter the Main Menu.

-**OK** : You can select an item in the SAT,SUBTITLE or LANG list. Program list is displayed according to TV/Radio Mode.

-**EXIT** : The button makes a banner or other lists including SAT,SUBTITLE and LANG disappeared.

-**PAUSE**: Shows the video/audio output of receiver, To clear pause press PAUSE button again.

-**INFO** : If you press the INFO button once, a banner is displayed on the upper part of the screen, and if you press the button again before the upper banner is disappeared, the banner will show the details of the currents channel.

-**FAV** : The Favorite List is displayed.

-**EPG** : The EPG menu of the current TP is displayed.

6.2 TV/Radio List

If you press "**TV/RADIO/OK**" key on the remote controller, at No menu state, the screen is displayed as follows (Fig 6.2).

Fig6.2

You can preview the channel and move the channel with the "**UP/DOWN**" button

6.3 Favorite List

If you press "**FAV**" on the remote controller at No menu state, the screen is displayed as follows (Fig 6.3). You can preview the channel and move the channel with the "**UP/DOWN**" button.

Fig6.3

6.4 EPG

EPG shows the event information of the current channel by time zone.

EPG is divided into Weekly mode, Daily mode, and Extend mode, and provides timer based recording and automatic power that have EPG information.

Fig6.4

If you press "**EPG**" key, the Weekly mode is displayed as the default mode.

Move the cursor to an event in the required time zone, and press "**RED**" key. Then the timer is set to the designated time. See "**4.7 Timer Setting**" for detail

Fig6.5

Main Menu

6.5 Volume Control

Adjust volume: Press "**Left/right**" key on the remote controller at No menu state.

Mute: Press "**Mute**" key on the remote controller at No menu state

Fig6.6

6.6 INFO

If you press the **INFO** button once, a banner is displayed on the upper part of the screen, and if you press the button again before the upper banner is disappeared, the banner will show the details of the currents channel

Fig6.7

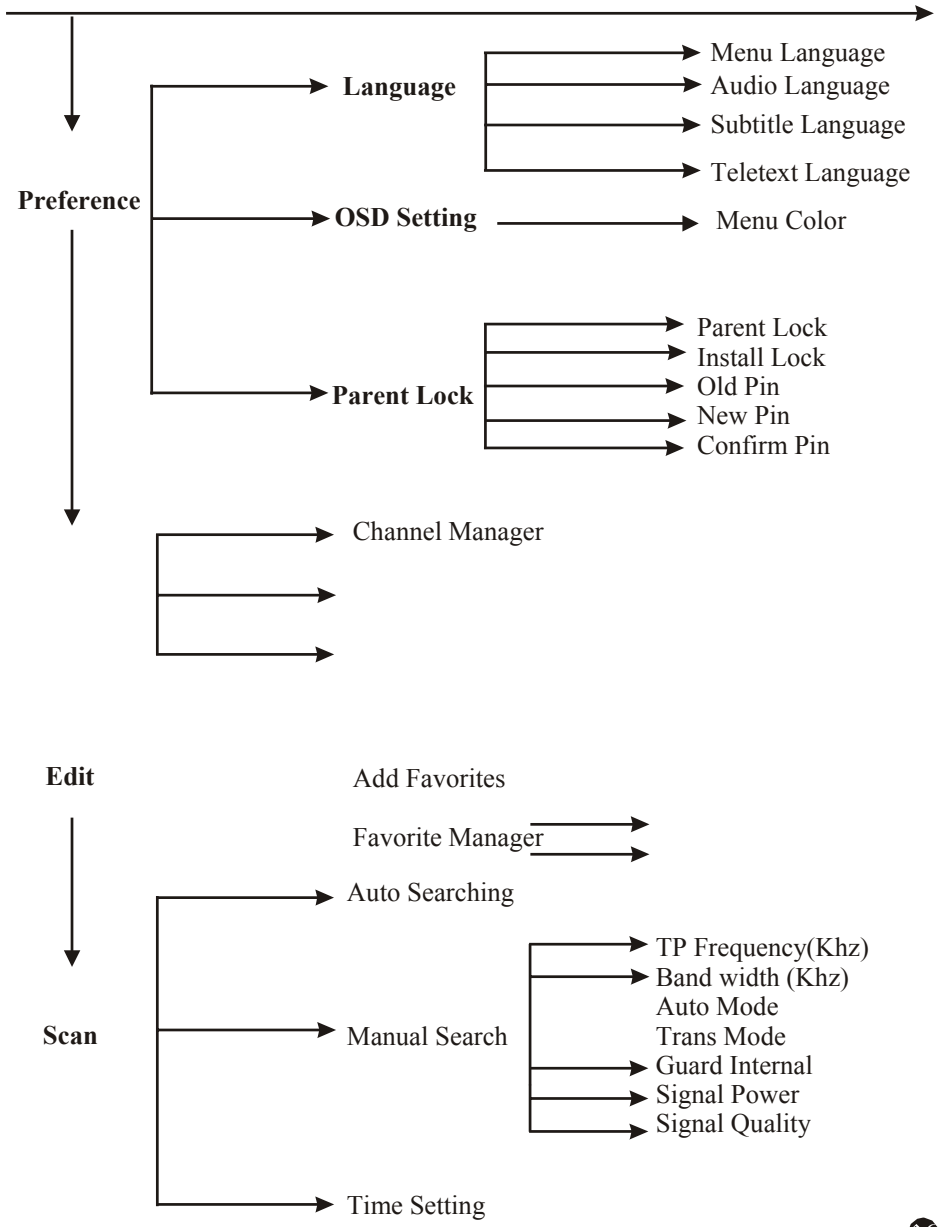
7.Game

The Classic game of all time , Teris is one of most highly playable game.

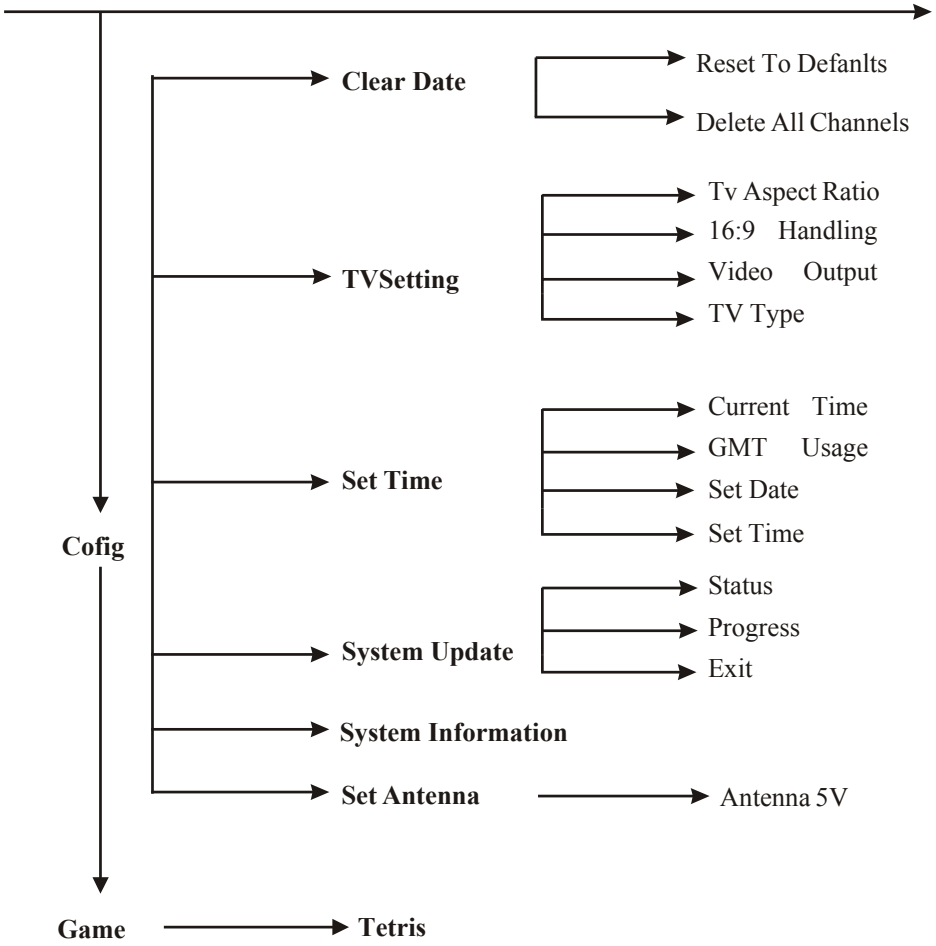
Fig7.1

Menu Map

Main Menu



Menu Map



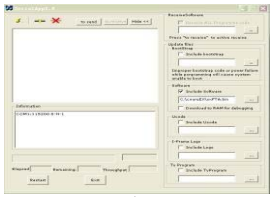
Software Update

1..Requested Devices

1) Computer: offer new software and procedure for the digital terrestrial receiver.
2) Digital terrestrial receiver : The receiver which is going to be upgraded. (short as "receiver")
3) Upgrading cable for PC to Unit : A cross RS-232 cable

2.Operation

1) Turn off STB
2) A .Open update tool **Serial App 2.6.exe**
B. Choose the **Include Software** in Software column.
C. Choose the name & way of update file . (see picture A)

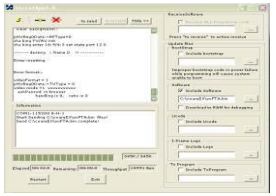

A

3) Turn on STB . You can see an window on the left show as below :(see picture B)

At the same time you can see the progress in the below.

B

Bootstrap Version 108HY for AVA 9700
Copyright (C) 1999-2003 LSI Logic Corporation
Creation date : Jun.21, 2004 11:35:01
Stepping : AviV 9700 B
SYS Clock : 121.5 MHz
TYPE : ??? [SDR, 1X32 Mbits]
SCF : 0 x 8201135 D [INIT] 0 X 82C 1135D
SCC: 0 x 010078A0 [INIT] 0 x 010078 A0
DLL: 0 x 00000368
Time out : Update ? Auto


C

4). Update finished . (see picture C)
If you want to update again, please click the Restart button , then repeat the process from one to three.

5). Update LOGO
The process is the same . A. Choose the **Include Logo** in I Frame Logo.
B. choose the name &way of update file .

Software Update

3. Update by Receiver

1.Set-to-set Software update with TV

1) Please connect Master receiver and Slave receiver with RS232 cable. Please note that both master receiver and slave receiver must be turned off before the connection with RS232 cable.

2) Power on Master receiver and enter into **Config menu** to display system update, then turn on the slave receiver, after that the software will be transferred from master receiver to slave receiver after detect. And after finished, the slave receiver will re-boot itself, and be operation mode.

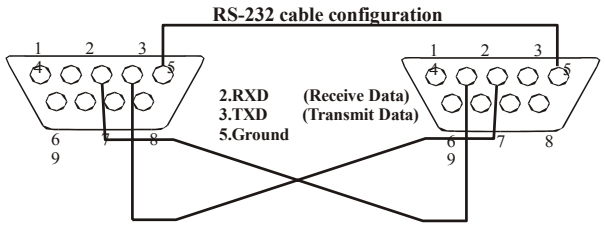
2. Set-to-set Software update without TV

1) Please connect Master receiver and Slave receiver with RS232 cable . Please note that both master receiver and slave receiver must be turned off before the connection with RS232 cable..

2) Please turn on the master receiver by clicking the power switch on the back cover of the receiver.

3) Software updating begins, and wait till Slave Receiver re-boot itself and be operation mode.

Master **Slave**



Trouble Shooting

● **Trouble shooting**

Possible Causes	Solution
No picture but on screen menus appear!	
Terrestrial Antenna system is incorrectly installed.	Check all connections and leads,
Faulty Antenna	Replace Antenna
Incorrect TP data	Re-input TP data
High levels of signal loss through cables	Use a signal booster or replace cables
Faulty connection	Repair connection
Remote control not working!	
Batteries exhausted	Check batteries
Incorrect function selected	Press correct function key
Remote control not pointed at device	Make sure your remote control is pointing on your device
No stereo sound!	
Incorrect cable connecting receiver and TV	Check SCART cable
Incorrect volume value	Check volume value

Specification

1. VIDEO

Decoding Bit	MPEG2 & MPEG1 compatible
rate Output	Max 15Mbps
Aspect ratio	NTSC/PAL
Active pixel	4:3 / 16:9
Output connector	720 x480@30fps; 720 x576@25fgs
	RCA、TV Scart、VCR Scart、S-Video

2. AUDIO

Decoding	
Mode	MPEG2 & MPEG l layer I & II
Bit rate	Mono、Dual、Stereo、Joint stereo
	Max 384kbps

3. DEMODULATOR

Demodulation	
Symbol rate	COFDM
Outer code	2K or 8K
Inner code	Rs(204、188、8)
Energy dispersion	All DVB-T mode
	DVB-T recommendation

4. INPUT SIGNAL

Frequency	
Bandwidth	51MHz~858MHz
Input level	6 / 7 / 8Mhz
Channel band width	32dBV
Input socket	36MHz
Output socket	IEC 169-24 FemaleX1
	IEC 169-24，5V DC 75mA Max

5. RF MODULATOR

Input	
Output	IEC 169-24 MaleX1
Band	IEC 169-24，FemaleX1
TV Standard	UHF
Output Channel	PAL BG/I/DK，NTSC M
	21~69(PAL)，14~83(NTSC)

6. MISCELLANEOUS

Supply voltage	
Power consumption	100~240VAC 50/60Hz
Low consumption(Standby)	10watts max
Operation temperature	<3watts
Storage temperature	+5℃to +40℃
	-20℃to +70℃